241 433 In spite of all this, the Barundi do not grow more crops than they need for their subsistence during the year. The soil [134] is, for the most part, fertile red earth and, in the valley plains, dark gray alluvial soil or humus, except in the sterile and stony quartzite regions of the east. With or without artificial irrigation, this soil could produce much more if a larger area were cultivated. This is prevented mainly by the absence of trade. [56] Since there are neither markets nor organized trade in the large area of central Urundi -- only the Tanganyika region possesses both -- the Murundi could do nothing with what he produced beyond his own needs. Moreover, the Murundi does not anticipate bad harvests. Like nearly all Negroes, he never worries about the future. Since not even the hardy manioc 731 (which, even in the driest years when everything else withers, still furnishes a good yield) is grown in large quantities, extensive areas are plagued by famine in poor harvest years. This is especially true of the arid quartzite regions of eastern Urundi. [197] Then the missionary stations (Mugera, Mujaga, and others) and the government try to help by importing grain (sorghum) from Uha and Usámbiro, but they still cannot prevent many people, particularly children, from starving to death.

241 423 Another important reason that prevents further expansion of agriculture can be found in the way land is owned, in the overruling power of the Batussi who claim, above all, grazing land for their herds of cattle. We shall discuss this problem later (p. 57).

241 136 Various efforts are made to protect the growing crops against pests. Weeds are cleared away; caterpillars, beetles, and snails are picked off; birds are frightened away by scarecrows which, for example, are made of gallows-shaped sorghum stalks tied one upon the other with dry, rattling fruit suspended from them. Large animals, however, like the wild boars and baboons in the mountains of western Urundi, are either kept out by fences or chased away by watchmen who walk around in the daytime and at night take up their positions in small huts perched on high posts. From there the guards from time to time set up a loud shouting or rattle with sticks. In the valleys of western

133 a chimney opening at the bottom (1), has a diameter of about 400 meters.

1. In 1912 there were two juxtaposed chimneys. The wall that divided them disappeared in 1915.

The column of smoke, which was rather light between the years 1908 and 1926, thickened in January, 1927 and may be seen from afar.

Its neighbor to the right, the Nyamlagira (3, 056 meters), is more active. The mouth of the volcano is nearly 2, 000 meters in diameter.

Lava in fusion is constantly boiling in four or five small chimneys scattered along part of the old crater. It exudes fumaroles /sic/ and sulphurous vapors. The volcano called Mugunga or Ntsuro, not far from Lake Kivu, still emits some occasional vapors. Its eruption is of recent date, since it revived at the end of December, 1912.

Let us still mention the Bwana-Mahalage, which is nearly lost among blocks of lava. It erupted twice between 1903 and 1905, and since then has given no signs of life.

Its crater is now almost completely obstructed, and its diameter is insignificant.

In places where lava has begun to desintegrate, as happened [134] in the Bugoyi plain, which extends northeast of Lake Kivu, the soil is quite fertile.

The aspect of the land is imposing and pleasant to gaze at. The lake with its islands, the high peaks that block the horizon to the north, the plain strewn with craters, and the active volcanoes [132] make it an area unsurpassed in scenic value. The climate is temperate and the soil rich. It is volcanic soil that keeps disintegrating without ever being exhausted. One finds in the fields sorghum, peas, beans, sweet potatoes, and eleusine. Edible arum is rare and so is manioc, but potatoes and wheat are becoming increasingly widespread. The soils of Byahi and Riverere are most propitious to the

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134 cultivation of the famous plante médicée /Tr.: "Medici plant"/
241 (tobacco), the sale of which provides a living for a number of families. /26/

The vast Rwrere plain covers nearly half of the Bugoyi province.
133 Not a spring or brook is to be found there. The rain water immediately
312 drains beneath the lava, which is covered by a mere 50 or 60 centimeters of arable soil. The inhabitants are compelled to cover distances varying between 10 and 20 kilometers, round trip to draw water from the brooks of the Sebeya or the Mutura. During the rainy season, they carefully save the water that collects in the crags of rocks or in small moats dug by each person around his dwelling. The owners of banana groves use the water held by the thicker husks of the banana trees. These are split lengthwise with a knife, and produce water lightly mixed with potash. The natives get used to drinking this liquid without any repugnance.

The Bagoyi who live in the mountainous area are better off than the plains people as far as water is concerned.

133 The northern area, called Bigogo, consists entirely of pastures. It is inhabited by the herding Batutsi, who own numerous herds of cattle, the wealth of the country.

[137] These same lands of volcanic origin, gave birth to a beautiful forest where bamboo grows along with some rare species of trees. It spreads east of Kivu in a north-south direction.

[311] The natives, ever in search of fertile fields and charcoal, have made terrible inroads into it. This is why large gaps are to be found in it.

The central and eastern provinces, the Nduga, Bwana-Mkali, Gissaka, Buganza, etc., are made up of long rolling hills, nearly
[311] always separated by small valleys which are often transformed into marshes and which are very useful for summer planting.

The Buliza, Bussigi, and Luhanga are long plateaus where numerous herds of goats, sheep, and cows graze. These areas lie at an altitude of about 2, 200 meters. /27/

Ruanda also has lakes, the most important of which is Kivu, which is 120 kilometers long and from 40 to 50 kilometers wide.

423 are least fortunate or most enterprising get together to sell or exchange
[311] their plots and go to the edge of the forest to buy a piece of land or to develop the one they owned there.

From then on, the clan to which they belong includes an additional village.

As in Europe the sale and lease of fields and banana groves is made in the presence of witnesses. Land boundaries are marked with stones and other conventional signs.

A felled tree, a displaced stone, some ground which has been broken in a neighbor's field over the dividing line, such things cause frequent litigations that give rise to disunity within families and among tribes over long periods of time.

The Munyarwanda /sing. of Banyarwanda/ remains attached
361 to his native village, to his plot of land. He does not feel the need to move elsewhere, to change his domicile, as do the Blacks settled east and west of Tanganyika.

Ruanda soil is richer by far and sustains numerous and varied
[134] crops.

In addition to the banana grove, which is the most important
245 part of his property, the Munyarwanda has begun to plant trees and to cultivate coffee, which brings in large profits to which he was not
[231] accustomed. Ownership of a small herd of cattle or sheep makes his home even dearer to him.

It may be said that his home life is more stable than in neigh-
593 boring areas, and that he leaves it only rarely (1).

[166]

1. The Blacks, too, are familiar with nostalgia and home sickness. The fear of a vendetta or the attraction of large salaries may temporarily induce the natives to expatriate themselves. Sooner or later, however, they return to the cradle of their ancestors. The Banyarwanda cite characteristic instances of this.

9:Maquet E-5 (1949-1951) 1961 FO42 Rundi FO42

There is as much as a one-month range of variations in the dates of the rainy and dry seasons each year. The precipitations are very irregular. Sometimes for a few weeks there is heavy rainfall lasting ten or twelve hours followed by a few dry days, at other times there is a 2- or 3-hour shower every day. Besides this fundamental irregularity there is no uniformity throughout the country. Owing to the very uneven relief, neighbouring regions or even neighbouring groups of hills and valleys, may have quite dissimilar climates.

Although it is believed that the country was covered with forest in the remote past, now only three per cent. of the surface of Ruanda is woodland; even if savannah with trees is taken into account the figure is not brought up to more than 6·5 per cent.[4] At the beginning of the century the figures were almost certainly not higher, and very likely lower. Indeed, the policy of the Administration has been to attempt to protect by regulation the forests which were left and to promote the replanting of trees. The present-day typical Ruanda landscape, eucalyptus-covered hills and roads bordered by three or four lines of trees, is new. Fifty years ago the country had an even more denuded appearance than it has today.

The result of the scarcity of trees in a country of steep hills has been erosion. Torrential rainfall has washed off the more fertile top soil. The deterioration of the ground has been a long process which has not yet been reversed. The north-western part of Ruanda provides an exception to the general poverty. Here the soil is of volcanic origin, formed from recent lava, and rich. The land at the bottom of valleys everywhere is, of course, notably better than on the slopes.

A good top-soil is important not only for cultivation: allowing a slow infiltration of water, it helps to form subterranean watersheds situated not too deeply underground. A decrease in this top-soil has had the effect that some of these practically superficial water reserves which feed sources have drained away. I have been told more than once by old people that in such or such a place there was a water source when they were young. When digging a well now one has to go very deep.

These phenomena, erosion, impoverishment of soil, and drying up of sub-soil, are not to be attributed only to the action of the purely natural factors mentioned (the heavy rainfalls and the

[4] Ministère des Colonies, 1951b, p. 331.

9:Maquet E-5 (1949-1951)1961 FO42 Rundi FO42

orography of the country). They are due to the conjunction of these physical circumstances with the particular way in which the human occupation of the land has taken place.

2. HUMAN OCCUPATION

Several hypotheses have been advanced in attempts to reconstruct the history of the human occupations of Ruanda. We are not concerned with them here. Let us summarize only those features which are of significance for our purpose and which have a high degree of probability.

The present population of Ruanda is clearly composed of three groups: Twa, Hutu, and Tutsi. These groups are very unequal numerically. In the middle of 1956, according to a Government demographic survey, the Twa constituted 0·67 per cent. of the total Ruanda population, the Hutu 82·74 per cent., and the Tutsi 16·59 per cent.[5] Differences that are immediately noticeable between these groups concern their activities, their social statuses, and their physical types. The Twa are hunters, potters and iron-workers. Twa hunters are not numerous, as game is rare in most parts of Ruanda owing to the scarcity of forest. Some of them make a living as singers, dancers, and buffoons. The Hutu are agriculturists and the Tutsi pastoralists. The statuses of the three groups are hierarchically ranked. The Tutsi group constitutes an aristocracy, the Hutu are commoners, and the Twa are said, half jokingly, by most of the other Ruanda, to be more akin to monkeys than to human beings. A definite physical appearance is considered typical of each group. According to the socially accepted descriptions of the three stereotypes the typical Twa is short, pygmoid rather than pigmy, with a head low in the crown, face and nose flat, cheek-bones prominent, forehead bulging, eyes narrow and slightly oblique. Hutu characteristics are woolly hair, flat broad nose, thick lips often everted, and middle stature. Tutsi are very slender and tall. They often have a straight nose and a light brown skin colour. The objective measurements of Professor Jean Hiernaux do not entirely coincide with these stereotypes.[6]

[5] These figures have been kindly communicated by Mr. J. Revelard who was at that time in charge of the Ruanda-Urundi Demographic Surveys (Endemoru).

[6] Hiernaux, 1956b, pp. 34-53. Cf. Czekanowski, 1917, pp. 122-34. See the interesting photographs in Czekanowski, 1911, plates 1-61 and in Hiernaux, 1956b, plates VI-VII.